

May 9: George Lusztig (MIT), “Generalization of Steinberg’s cross section.”

Let G be a semisimple group over an algebraically closed field. If C is the regular unipotent class in G , there is an affine subspace of G of dimension equal to the codimension of C in G which intersects C in exactly one point (Steinberg, 1965). I will talk about a generalization of this result where C is replaced by any distinguished unipotent class (joint work with Xuhua He). Earlier, results of this type were known in the Lie Algebra context over complex numbers (Kostant, Slodowy).

If time permits I will also talk about a second topic: a definition of “special” conjugacy classes in a Weyl group W in canonical bijection with the special representations of W .